

JAN 05 2007

Application No.: 10/608,581

Docket No.: TOW-029RCE

REMARKS

Applicant amends claim 1. No new matter is added. Support for the claim amendment can be found throughout the application and at least at Page 5, lines 1-13, Page 21, lines 18-27, and Figs. 4-5 and 10. Upon entry of this amendment, claims 1 and 4-11 are pending, of which claim 1 is independent. Applicant respectfully submits that the pending claims define over the art of record.

Applicant thanks the Examiner for conducting a telephone interview with Applicant's representative. Applicant notes with appreciation that the Examiner agreed during the telephone interview that amended claim 1 overcomes the prior art of record.

Claim Rejection Under 35 U.S.C. §102

Claims 1, 4-6, and 8-10 are rejected under 35 U.S.C. §102(b) as being anticipated by European Patent Application Publication No. 0357025 to Sato et al. (hereafter "Sato"). Applicant respectfully submit that the Sato reference fails to disclose the limitation that a fuel gas channel and an oxygen-containing gas channel are formed between the first plate and the second plate in the second area, the fuel gas channel and the oxygen-containing gas channel are separated by a partition, the partition including a ridge protruding from the first plate to contact the second plate, as recited in amended claim 1.

The Sato reference teaches a separator 24 that includes an upper flat-plate member 22, a lower flat-plate member 23, and a wave-form member 21 that is in between the upper and lower flat-plate members 22 and 23. See Fig. 6. In other words, the upper flat-plate member 22 does not contact the lower flat-plate member 23. Furthermore, the Sato reference discloses a fuel channel between upper flat-plate member 22 and the waveform member 21, and an air channel between the waveform member 21 and the lower flat-plate member 23. See Fig. 6. In other words, there is no fuel gas channel and oxygen-containing gas channel formed between two plates where one plate has a ridge to contact the other plate. In contrast, claim 1 requires that a fuel gas channel and an oxygen-containing gas channel formed between the first plate and the second plate in the second area, the fuel gas channel and the oxygen-containing gas channel are

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separated by a partition, the partition including a ridge protruding from the first plate to contact the second plate.

Accordingly, Applicant respectfully requests that the Examiner reconsider and withdraw the rejection of claim 1. Applicant notes that the dependent claims also recite patentable subject matter. As such, for this and the reasons set forth above, Applicant respectfully submits that the dependent claims define over the art of record.

Claim Rejection Under 35 U.S.C. §103

Claims 7 and 11 are rejected under 35 U.S.C. §103(a) as being unpatentable over the Sato reference in view of United States Patent Application Publication No. 2002/0146601 to Sugiura et al. (hereafter "Sugiura"). Applicant respectfully submit that the Sato reference and the Sugiura reference, either alone or in combination, fail to teach or suggest the limitation that a fuel gas channel and an oxygen-containing gas channel are formed between the first plate and the second plate in the second area, the fuel gas channel and the oxygen-containing gas channel are separated by a partition, the partition including a ridge protruding from the first plate to contact the second plate, as recited in amended claim 1 that claims 7 and 11 depend.

As set forth above, the Sato reference does not teach or suggest the limitation that a fuel gas channel and an oxygen-containing gas channel are formed between the first plate and the second plate in the second area, the fuel gas channel and the oxygen-containing gas channel are separated by a partition, the partition including a ridge protruding from the first plate to contact the second plate.

The Sugiura reference teaches a separator with a single plate. See Fig. 3. Hence, it is not possible for the Sugiura reference to teach or suggest the limitation that each separator includes a first plate and a second plate and the partition includes a ridge protruding from the first plate to contact the second plate, as required by claims 7 and 11.

Additionally, the Sugiura reference teaches away from the claimed invention. The Sugiura reference teaches an oxidizing gas passage 52 that is disposed adjacent to a coolant passage 54. As the oxidizing gas passage 52 is cooled by the coolant in the coolant passage 54,

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water droplets are condensed in the oxidizing gas passage 52. To decrease the amount of condensation in the oxidizing gas passage 52, the cross-section of the oxidizing gas passage 52 is made smaller than of oxidizing gas passage 56 that is not adjacent to a coolant passage so that oxidizing gas flow in the oxidizing gas passage 52 is faster than that in the oxidizing gas passage 56.

In contrast, the size of the bosses on the oxygen-containing gas side is made larger than that of the bosses of the fuel gas side for preventing pressure loss in the oxygen-containing gas even if the flow rate of the oxygen-containing gas increases. See Page 8, lines 2-12.

In addition, the Sugiura reference is applicable to a solid polymer electrolyte fuel cell (PEFC) that is a polymer electrolyte membrane (PEM) type. In contrast, the present application is applicable to a solid oxide fuel cell (SOFC).

Accordingly, Applicant respectfully submits that the combination of the Sato reference and the Sugiura reference fail to teach or suggest the limitation that a fuel gas channel and an oxygen-containing gas channel are formed between the first plate and the second plate in the second area, the fuel gas channel and the oxygen-containing gas channel are separated by a partition, the partition including a ridge protruding from the first plate to contact the second plate. Applicant respectfully request that the Examiner reconsider and withdraw the rejection of claims 7 and 11.

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CONCLUSION

In view of the above amendment, Applicant believes the pending application is in condition for allowance.

Applicant believes no fee is due with this statement. However, if a fee is due, please charge our Deposit Account No. 12-0080, under Order No. TOW-029RCE from which the undersigned is authorized to draw.

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Respectfully submitted,

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